



SECTION THRU ELASTOMERIC BEARING

- * W = BOTTOM FLANGE WIDTH OF PRESTRESSED GIRDERS MINUS 2"
- © CHECK AASHTO 14.4.1.4 REQUIREMENTS TO SEE IF THIS PLATE SHOULD BE TAPERED.

EXPANSION BEARINGS FOR PRESTRESSED CONCRETE GIRDERS

| (INCH | H HES) | EXP. LENGTH (FEET) | TOTAL BEARING HEIGHT H (INCHES) | TOTAL ELASTOMER THICKNESS (INCHES) | LONGITUDINAL LENGTH OF BEARING L (MIN.) | STEEL PLATE THICKNESS (INCHES) EACH | ELASTOMER THICKNESS T (INCHES) | NO. OF PLATES REO'D. |
|-------|-----------|--------------------------|---|---|--|---|---|----------------------------|
| | 1" | 135 | 21/2" | 2" | 8" | 1/8" | 1/2" | 4 |
| 1 | !/4" | 170 | 31/8" | 21/2" | 10" | 1/8" | 1/2" | 5 |
| 1 | 1/2" | 205 | 33/4" | 3" | 1'-0'' | 1/8" | 1/2" | 6 |
| 1 | 3/4" | 240 | 43/8" | 31/2" | 1'-2'' | 1/8" | 1/2" | 7 |
| | 2" | 2 7 5 | 5" | 4" | 1'-3'' | 1/8" | 1/2" | 8 |
| 2 | 21/4" | 310 | 55/8" | 41/2" | 1'-5" | 1/8" | 1/2" | 9 |

- THE "EXPANSION LENGTH" IN THE TABLE WAS CALCULATED BASED ON THE TOTAL ELASTOMER THICKNESS IN COLUMN (4), IT IS FOUND BY APPLYING AASHTO (14.4.L.3), USING A TEMPERATURE RANGE OF 100° F. AND A COEFFICIENT OF THERMAL EXPANSION OF 0.000006 FT./FT./°F. THE DESIGNER IS TO SELECT PRELIMINARY BEARING DATA FROM THE TABLE BASED ON "EXPANSION LENGTH" AND THEN COMPLETE THE DESIGN BY SATISFYING ALL CRITERIA IN AASHTO SECTION 14 (DIVISION I). (SEE SECTION 27.7 IN "BRIDGE MANUAL" FOR DESIGN EXAMPLE.)
- ▲ L (MIN.) IS BASED ON STABILITY REQUIREMENTS (AASHTO 14.4.1.5).
- A =TOTAL HORIZONTAL MOVEMENT OF SUPERSTRUCTURE MEASURED FROM STATE AT WHICH BEARING IS UNDEFORMED.

NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "LAMINATED ELASTOMERIC BEARING PADS".

ON BEARING REPLACEMENTS, COMPRESSION LOAD AND ADHESION TESTS WILL BE WAIVED WHERE BEARINGS ARE DETAILED TO MEET HEIGHT REDUIREMENTS.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ELASTOMERIC BEARINGS FOR PRESTRESSED CONCRETE GIRDERS

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION
STRUCTURES DEVELOPMENT SECTION

APPROVED: 6/02